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10/594,322	01/17/2007	Daisuke Hirokane	295408US40PCT	3313

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EXAMINER	
FEELY, MICHAEL J	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/594,322	HIROKANE, DAISUKE	
	Examiner	Art Unit	
	Michael J. Feely	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Pending Claims

Claims 1-8 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo (JP 2002-161193) in view of Shimizu et al. (US Pat. No. 5,919,844).

Regarding claims 1-8, Matsuo discloses: ***(1)*** an epoxy resin composition for encapsulating semiconductors (Abstract) comprising: (A) an epoxy resin (Abstract; paragraph 0006), (B) a phenol resin (Abstract; paragraph 0007), (C) an inorganic filler (Abstract; paragraph 0010), (D) a curing accelerator (Abstract; paragraph 0008), and (E) a glycerol tri-fatty acid ester produced by dehydration condensation reaction of glycerol and a saturated fatty acid with a carbon atom content of 24-36 (Abstract; paragraph 0009); and ***(5-8)*** a semiconductor device comprising a semiconductor element encapsulated using the epoxy resin composition according to claim 1 (Abstract; paragraph 0005).

Matsuo fails to disclose: ***(1-4)*** (F) a hydrotalcite compound.

Shimizu et al. disclose a similar encapsulating composition *(see Abstract; claims)*. Furthermore they disclose the use of: ***(1)*** (F) a hydrotalcite compound (column 8, line 30 through

column 9, line 43); ***(2)*** wherein the hydrotalcite compound is a compound shown by the following formula (1) and/or its sintered material,

$$Mg_xAl_y(OH)_zCO_3 \cdot nH_2O \qquad (1)$$

wherein x, y, z, and n are positive numbers (column 9, lines 1-37); ***(3)*** wherein the hydrotalcite compound is a hydrotalcite of the above formula (1) in which $0.15 \leq (y/x+y) \leq 0.35$, $1.8 \leq (z/x+y) \leq 2.5$, and $0 \leq n \leq 5$ and/or its sintered material (column 9, lines 1-37); and ***(4)*** wherein the hydrotalcite compound is a compound shown by the formula $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ (column 9, lines 26-37). The hydrotalcite acts as an ion capturing agent and provides *enhanced humidity stability* to the encapsulating composition.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the instantly claimed hydrotalcite compound, as taught by Shimizu et al., to the encapsulating composition of Matsuo because Shimizu et al. disclose a similar encapsulating composition, wherein hydrotalcite is added as an ion capturing agent. The presence of the hydrotalcite provides enhanced humidity stability to the encapsulating composition.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuo (JP 2002-161193) in view of Maeda et al. (US Pat. No. 6,190,787).

Regarding claims 1-8, Matsuo discloses: ***(1)*** an epoxy resin composition for encapsulating semiconductors (Abstract) comprising: (A) an epoxy resin (Abstract; paragraph 0006), (B) a phenol resin (Abstract; paragraph 0007), (C) an inorganic filler (Abstract; paragraph 0010), (D) a curing accelerator (Abstract; paragraph 0008), and (E) a glycerol tri-fatty acid ester produced by dehydration condensation reaction of glycerol and a saturated fatty acid with a

carbon atom content of 24-36 (Abstract; paragraph 0009); and ***(5-8)*** a semiconductor device comprising a semiconductor element encapsulated using the epoxy resin composition according to claim 1 (Abstract; paragraph 0005).

Matsuo fails to disclose: ***(1-4)*** (F) a hydrotalcite compound.

Maeda et al. disclose a similar encapsulating composition *(see Abstract; claims)*. Furthermore they disclose the use of: ***(1)*** (F) a hydrotalcite compound (column 6, line 41 through column 7, line 8); ***(2)*** wherein the hydrotalcite compound is a compound shown by the following formula (1) and/or its sintered material,

$$Mg_xAl_y(OH)_zCO_3 \cdot nH_2O \qquad (1)$$

wherein x, y, z, and n are positive numbers (column 6, lines 50-55: *formula 6*); ***(3)*** wherein the hydrotalcite compound is a hydrotalcite of the above formula (1) in which $0.15 \leq (y/x+y) \leq 0.35$, $1.8 \leq (z/x+y) \leq 2.5$, and $0 \leq n \leq 5$ and/or its sintered material (column 6, lines 50-55: *formula 6 obviously embraces these ranges*); and ***(4)*** wherein the hydrotalcite compound is a compound shown by the formula $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ (column 6, lines 50-55: *formula 6 obviously embraces this embodiment*). The hydrotalcite acts as an ion scavenger and *prevents corrosion* of aluminum circuits and pads.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the instantly claimed hydrotalcite compound, as taught by Maeda et al., to the encapsulating composition of Matsuo because Maeda et al. disclose a similar encapsulating composition, wherein hydrotalcite is added as an ion scavenger. The presence of the hydrotalcite prevents corrosion of aluminum circuits and pads.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirokane (JP 2002-080695) in view of Shimizu et al. (US Pat. No. 5,919,844).

Regarding claims 1-5, Hirokane discloses: ***(1)*** an epoxy resin composition for encapsulating semiconductors (Abstract) comprising: (A) an epoxy resin (Abstract; paragraph 0007), (B) a phenol resin (Abstract; paragraph 0008), (C) an inorganic filler (Abstract; paragraph 0010), (D) a curing accelerator (Abstract; paragraph 0009), and (E) a glycerol tri-fatty acid ester produced by dehydration condensation reaction of glycerol and a saturated fatty acid with a carbon atom content of 24-36 (Abstract; paragraph 0011); and ***(5-8)*** a semiconductor device comprising a semiconductor element encapsulated using the epoxy resin composition according to claim 1 (Abstract; paragraph 0006).

Hirokane fails to disclose: ***(1-4)*** (F) a hydrotalcite compound.

Shimizu et al. disclose a similar encapsulating composition *(see Abstract; claims)*. Furthermore they disclose the use of: ***(1)*** (F) a hydrotalcite compound (column 8, line 30 through column 9, line 43); ***(2)*** wherein the hydrotalcite compound is a compound shown by the following formula (1) and/or its sintered material,

$$Mg_xAl_y(OH)_zCO_3 \cdot nH_2O \qquad (1)$$

wherein x, y, z, and n are positive numbers (column 9, lines 1-37); ***(3)*** wherein the hydrotalcite compound is a hydrotalcite of the above formula (1) in which $0.15 \leq (y/x+y) \leq 0.35$, $1.8 \leq (z/x+y) \leq 2.5$, and $0 \leq n \leq 5$ and/or its sintered material (column 9, lines 1-37); and ***(4)*** wherein the hydrotalcite compound is a compound shown by the formula $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ (column 9, lines 26-37). The hydrotalcite acts as an ion capturing agent and provides *enhanced humidity stability* to the encapsulating composition.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the instantly claimed hydrotalcite compound, as taught by Shimizu et al., to the encapsulating composition of Hirokane because Shimizu et al. disclose a similar encapsulating composition, wherein hydrotalcite is added as an ion capturing agent. The presence of the hydrotalcite provides enhanced humidity stability to the encapsulating composition.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirokane (JP 2002-080695) in view of Maeda et al. (US Pat. No. 6,190,787).

Regarding claims 1-8, Hirokane discloses: ***(1)*** an epoxy resin composition for encapsulating semiconductors (Abstract) comprising: (A) an epoxy resin (Abstract; paragraph 0007), (B) a phenol resin (Abstract; paragraph 0008), (C) an inorganic filler (Abstract; paragraph 0010), (D) a curing accelerator (Abstract; paragraph 0009), and (E) a glycerol tri-fatty acid ester produced by dehydration condensation reaction of glycerol and a saturated fatty acid with a carbon atom content of 24-36 (Abstract; paragraph 0011); and ***(5-8)*** a semiconductor device comprising a semiconductor element encapsulated using the epoxy resin composition according to claim 1 (Abstract; paragraph 0006).

Hirokane fails to disclose: ***(1-4)*** (F) a hydrotalcite compound.

Maeda et al. disclose a similar encapsulating composition *(see Abstract; claims)*. Furthermore they disclose the use of: ***(1)*** (F) a hydrotalcite compound (column 6, line 41 through column 7, line 8); ***(2)*** wherein the hydrotalcite compound is a compound shown by the following formula (1) and/or its sintered material,

$$Mg_xAl_y(OH)_zCO_3 \cdot nH_2O \qquad (1)$$

wherein x, y, z, and n are positive numbers (column 6, lines 50-55: *formula 6*); ***(3)*** wherein the hydrotalcite compound is a hydrotalcite of the above formula (1) in which $0.15 \leq (y/x+y) \leq 0.35$, $1.8 \leq (z/x+y) \leq 2.5$, and $0 \leq n \leq 5$ and/or its sintered material (column 6, lines 50-55: *formula 6 obviously embraces these ranges*); and ***(4)*** wherein the hydrotalcite compound is a compound shown by the formula $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ (column 6, lines 50-55: *formula 6 obviously embraces this embodiment*). The hydrotalcite acts as an ion scavenger and *prevents corrosion* of aluminum circuits and pads.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the instantly claimed hydrotalcite compound, as taught by Maeda et al., to the encapsulating composition of Hirokane because Maeda et al. disclose a similar encapsulating composition, wherein hydrotalcite is added as an ion scavenger. The presence of the hydrotalcite prevents corrosion of aluminum circuits and pads.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyosawa (JP 2002-212393) in view of Shimizu et al. (US Pat. No. 5,919,844).

Regarding claims 1-8, Toyosawa discloses: ***(1)*** an epoxy resin composition for encapsulating semiconductors (Abstract) comprising: (A) an epoxy resin (Abstract; paragraph 0009), (B) a phenol resin (Abstract; paragraph 0010), (C) an inorganic filler (Abstract; paragraph 0012), (D) a curing accelerator (Abstract; paragraph 0011), and (E) a glycerol tri-fatty acid ester produced by dehydration condensation reaction of glycerol and a saturated fatty acid with a carbon atom content of 24-36 (Abstract; paragraph 0013); and ***(5-8)*** a semiconductor device

comprising a semiconductor element encapsulated using the epoxy resin composition according to claim 1 (Abstract; paragraph 0008).

Toyosawa fails to disclose: ***(1-4)*** (F) a hydrotalcite compound.

Shimizu et al. disclose a similar encapsulating composition *(see Abstract; claims)*. Furthermore they disclose the use of: ***(1)*** (F) a hydrotalcite compound (column 8, line 30 through column 9, line 43); ***(2)*** wherein the hydrotalcite compound is a compound shown by the following formula (1) and/or its sintered material,

$$Mg_xAl_y(OH)_zCO_3 \cdot nH_2O \qquad (1)$$

wherein x, y, z, and n are positive numbers (column 9, lines 1-37); ***(3)*** wherein the hydrotalcite compound is a hydrotalcite of the above formula (1) in which $0.15 \leq (y/x+y) \leq 0.35$, $1.8 \leq (z/x+y) \leq 2.5$, and $0 \leq n \leq 5$ and/or its sintered material (column 9, lines 1-37); and ***(4)*** wherein the hydrotalcite compound is a compound shown by the formula $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ (column 9, lines 26-37). The hydrotalcite acts as an ion capturing agent and provides *enhanced humidity stability* to the encapsulating composition.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the instantly claimed hydrotalcite compound, as taught by Shimizu et al., to the encapsulating composition of Toyosawa because Shimizu et al. disclose a similar encapsulating composition, wherein hydrotalcite is added as an ion capturing agent. The presence of the hydrotalcite provides enhanced humidity stability to the encapsulating composition.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyosawa (JP 2002-212393) in view of Maeda et al. (US Pat. No. 6,190,787).

Regarding claims 1-8, Toyosawa discloses: ***(1)*** an epoxy resin composition for encapsulating semiconductors (Abstract) comprising: (A) an epoxy resin (Abstract; paragraph 0009), (B) a phenol resin (Abstract; paragraph 0010), (C) an inorganic filler (Abstract; paragraph 0012), (D) a curing accelerator (Abstract; paragraph 0011), and (E) a glycerol tri-fatty acid ester produced by dehydration condensation reaction of glycerol and a saturated fatty acid with a carbon atom content of 24-36 (Abstract; paragraph 0013); and ***(5-8)*** a semiconductor device comprising a semiconductor element encapsulated using the epoxy resin composition according to claim 1 (Abstract; paragraph 0008).

Toyosawa fails to disclose: ***(1-4)*** (F) a hydrotalcite compound.

Maeda et al. disclose a similar encapsulating composition *(see Abstract; claims)*. Furthermore they disclose the use of: ***(1)*** (F) a hydrotalcite compound (column 6, line 41 through column 7, line 8); ***(2)*** wherein the hydrotalcite compound is a compound shown by the following formula (1) and/or its sintered material,

$$Mg_xAl_y(OH)_zCO_3 \cdot nH_2O \qquad (1)$$

wherein x, y, z, and n are positive numbers (column 6, lines 50-55: *formula 6*); ***(3)*** wherein the hydrotalcite compound is a hydrotalcite of the above formula (1) in which $0.15 \leq (y/x+y) \leq 0.35$, $1.8 \leq (z/x+y) \leq 2.5$, and $0 \leq n \leq 5$ and/or its sintered material (column 6, lines 50-55: *formula 6 obviously embraces these ranges*); and ***(4)*** wherein the hydrotalcite compound is a compound shown by the formula $Mg_6Al_2(OH)_{16}CO_3 \cdot 4H_2O$ (column 6, lines 50-55: *formula 6 obviously embraces this embodiment*). The hydrotalcite acts as an ion scavenger and *prevents corrosion* of aluminum circuits and pads.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add the instantly claimed hydrotalcite compound, as taught by Maeda et al., to the encapsulating composition of Toyosawa because Maeda et al. disclose a similar encapsulating composition, wherein hydrotalcite is added as an ion scavenger. The presence of the hydrotalcite prevents corrosion of aluminum circuits and pads.

Response to Arguments

8. Applicant's arguments filed July 6, 2009 have been fully considered but they are not persuasive.

Applicant argues that the experimental data set forth in Table 1 of the specification demonstrates unexpected results when a combination of components (E) and (F) are used in concert with components (A)-(D). The Office respectfully disagrees because the evidence set forth in Table 1 is not commensurate in scope with the claims.

Comparative Example 1 corresponds to the closest prior art *(each of the primary references cited above)*, wherein the closest prior art feature components (A), (B), (C), (D), and (E). Applicant contends that Examples 1-7, all featuring components (A), (B), (C), (D), (E), and (F), feature an unexpected improvement over Comparative Example 1. Specifically, Applicant contends that Examples 1-7 show considerable improvement in *PKG appearance failure*, in concert with excellent mold release-ability.

It does appear that the use of components (E) and (F), in concert with components (A)-(D), yields an unexpected improvement in *PKG appearance failure*; however, this only appears to be the case in formulations featuring:

- 80-94 wt% of (C), based on the overall weight of the composition *(see page 5, lines 16-25 of the specification or paragraph 0018 of the corresponding pre-publication)*;
- 0.02-1 wt% of (E), based on the overall weight of the composition *(see page 7, lines 1-2 of the specification or paragraph 0022 of the corresponding pre-publication)* ;
- 0.01-5 wt% of (F), based on the overall weight of the composition *(see page 8, lines 19-26 of the specification or paragraph 0025 of the corresponding pre-publication)*;
    - wherein (F) has an average particle diameter of 0.01-5 microns *(see page 8, line 27 through page 9, line 4 of the specification or paragraph 0026 of the corresponding pre-publication)*; and
    - wherein (F) has a specific surface area of 50 m^2/g or less *(see page 9, lines 5-8 of the specification or paragraph 0027 of the corresponding pre-publication)*.

This is because the specification discloses:

- If the amount of inorganic filler (C) is less than 80 wt%, cured products of the epoxy resin composition have an increased water absorptivity and, therefore, may have lowered strength, which may result in impaired soldering resistance. If 94 wt% is exceeded, the flowability may become insufficient, which may impair formability of the epoxy resin composition *(see page 5, lines 16-25 of the specification or paragraph 0018 of the corresponding pre-publication)*;
- If the amount of hydrotalcite compound (F) incorporated is below 0.01 wt%, ions cannot be sufficiently captured and the effect of reducing stains of the mold and package surface is inadequate. If the amount is above 5 wt%, the flowability of the resin will decrease

(see page 8, lines 19-26 of the specification or paragraph 0025 of the corresponding pre-publication);

- If the average particle diameter of (F) is less than 0.01 micron, flowability of the resin may be impaired. If the average diameter of (F) is more than 5 microns, the ion trapping rate may decrease *(see page 8, line 27 through page 9, line 4 of the specification or paragraph 0026 of the corresponding pre-publication)*;
- A specific surface area of (F) exceeding 50 m^2/g may impair flowability of the resin composition *(see page 9, lines 5-8 of the specification or paragraph 0027 of the corresponding pre-publication)*.

The scope of the claims is open to: (1) all amounts of components (A)-(F); (2) all particle sizes of (F); and (3) all surface areas of (F). However, the specification specifically addresses that the unexpected properties cannot be achieved when: (a) the amount of inorganic filler (C) is less than 80 wt% or higher than 94 wt%; (b) the amount of hydrotalcite compound (F) is less than 0.01 wt% or higher than 5 wt%; (c) the average particle diameter of (F) is less than 0.01 micron or higher than 5 microns; and (d) the specific surface area of (F) is higher than 50 m^2/g. Accordingly, the evidence set forth in Table 1 is not commensurate in scope with the claims.

Suggested Claim Language

9. The following is suggested claim language to move the instant claims towards allowance:

(1) An epoxy resin composition for encapsulating semiconductors comprising: (A) an epoxy resin, (B) a phenol resin, (C) an inorganic filler, (D) a curing accelerator, (E) a glycerol

tri-fatty acid ester produced by dehydration condensation reaction of glycerol and a saturated fatty acid with a carbon atom content of 24-36, and (F) a hydrotalcite compound;

wherein the inorganic filler (C) is provided in an amount of 80-94 wt%, based on the overall weight of the composition;

wherein the glycerol tri-fatty acid ester (E) is provided in an amount of 0.02-1 wt%, based on the overall weight of the composition;

wherein the hydrotalcite compound (F) is provided in an amount of 0.01-5 wt%, based on the overall weight of the composition, has an average particle diameter of 0.01-5 μm, and has a specific surface area 50 m^2/g or less.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/
Primary Examiner, Art Unit 1796

October 29, 2009